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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/337,667	06/22/1999	YOSHIHARU SASAKI	Q54770	9266

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/337,667

Applicant(s)

SASAKI ET AL.

Examiner

Hai C Pham

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2861

MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,12,17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claims 6-11 and corresponding dependencies of claim 12 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claims 13-16 remain withdrawn from consideration as being directed to a non-elected invention, the invention having been constructively elected by original presentation as discussed in the Office Action mailed 23 October 2000 (Paper No. 6).

Claim Objections

2. Claim 4 is objected to because of the following informalities:

- Line 4, "recording layer" should read --recording paper--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2 and 12/2 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 2:

- The following limitation "a cushion layer is formed between the surface of the recording paper and the image receiving layer and in physical contact with the surface of the recording paper" appears to be ambiguous and misleading in that it may lead to the understanding that the cushion layer is an *additional* layer distinct from the image receiving sheet and is provided between the surface of the recording paper and the image receiving layer, and that the image recording method would include an additional step of inserting the above cushion layer between the surface of the recording paper and the image receiving layer. However, the current specification indicates at page 15 that the cushion layer is an integral part of the image receiving sheet and that the image receiving sheet is attached onto the surface of the recording paper with the cushion layer facing the recording paper.

Claims 12/2 and 17 are dependent from claims 2 above, and are therefore indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 12/1, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takanashi et al. (U.S. 4,527,171) in view of Koguchi et al. (U.S. 5,578,824).

Takanashi et al. teaches the claimed invention except the toner sheet, provided as a cut sheet form, being wound onto a surface of the image-receiving layer (claim 1), the image receiving layer being provided in a form of a cut sheet (claim 19), the recording paper being attached to the recording drum by suction (claim 20). Thermal binder transfer sheet (4) is an image-receiving sheet having an image receiving layer (4b) and a substrate (4a). The sheet is attached to the recording paper by roller (6) to adhere the image-receiving layer on a surface of at least a whole recording region of the recording paper (see Abstract lines 11-14). The substrate is separated by take-up reel (5b) such that only the image-receiving layer is transferred onto the recording paper (see column 2, lines 36-45). All of the method steps in Takanashi et al. are clearly performed on the recording drum (2), as shown in Fig. 1.

Koguchi et al. discloses an image forming apparatus wherein the image receiving material (12) and the colorant sheet (10) can be feasibly provided either as a continuous web-like form (Fig. 4) or in the form of cut sheets (Fig. 2), and wherein, in either cases, the image receiving material and the colorant sheets are superimposed such that the ink from the colorant sheet can be transferred onto the image receiving material. In the case where the image receiving material and the colorant sheet are provided in the cut sheet forms, Koguchi et al. further teaches the recording drum (34) being provided with a mount/dismount mechanism (36), suction means [vacuum-type drum], or a combination of both such that the image-receiving material and the colorant sheets are

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securely wound and aligned in a superimposed manner (col. 23, lines 1-20). Koguchi et al. further teaches the color image being recorded with a plurality of donor sheets (for YMCK) without providing any additional image-receiving sheet (col. 21, line 56 to col. 22, line 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the toner sheets in cut sheet forms as taught by Koguchi et al. in the device of Takanashi et al., as well as the image receiving material in the cut sheet form along with the use of a vacuum-type recording drum, wherein the toner sheets are wound onto the recording paper and thus onto the image receiving layer thereon, because such provision would overcome the various disadvantages of roll media, thereby providing greater flexibility to quickly change the colors or sizes of the colorant sheets, and reducing operating cost so as a single defective sheet in the roll would not cause the complete roll to be scrapped instead of simply scrapping the defective sheet.

With regard to claim 21-22, Takanashi et al. teaches the image receiving layer (binder layer 9a) adhering onto a whole recording region of the recording paper (recording sheet 3), and the recording paper, the image receiving layer, and the toner sheet being disposed one atop another along an outer circumferential surface of the recording drum (2), over at least half of the circumference of the recording drum (Fig. 5a), and the color image recording being performed without providing additional image receiving sheet.

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7. Claims 5 and 12/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takanashi et al. in view of Koguchi et al., as applied to claim 1 above, and further in view of Fujimura et al. (U.S. 5,397,763).

Takanashi et al. in view of Koguchi et al. teaches the claimed invention except the cushion layer and the protective layer being formed as claimed.

Fujimura et al. teaches formation of a cushion layer formed between the surface of the recording paper and the image receiving layer in physical contact with the surface of the recording paper (column 7, line 45 through column 8, line 11 –1, see in particular column 7, lines 48-52, which indicates the physical contact by endowing the cushion layer with adhesiveness instead of providing an adhesive layer). Fujimura et al. further teaches provision of a protective layer on a transferred image to protect the image from damage (column 10, lines 62-66; column 11, line 58 through column 12, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a protective layer on the image recorded surface in Takanashi et al., as modified by Koguchi et al., for the purpose of protecting the transferred image from damage.

Allowable Subject Matter

8. Claims 2, 4, 12/2, 12/4, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. Claims 2, 12/2, and 17 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the indication of the allowability of the claimed invention is the inclusion of the limitations, in the combination as currently claimed, that the claimed image receiving sheet is provided with a cushion layer such that when the image receiving sheet is attached/superimposed to the recording paper the cushion layer is placed between the surface of the recording paper and the receiving layer and in physical contact with the surface of the recording paper.

Response to Arguments

11. Applicant's arguments filed 10/15/03 have been fully considered but they are not persuasive.

12. The method for recording an image directly on a recording paper by layering the recording paper, the image receiving sheet and the toner sheet on top of each other in the above ordered has been taught by Takanashi et al., except for the toner sheet being provided as a cut sheet form. However, Koguchi et al. teaches two old and well known modes of printing where the image receiving sheet and the toner sheet can be used as a continuous sheets on one hand, and as cut sheets on the other, and the configurations of such printing machines are readily available in the printing art. Although Koguchi et al. teaches the printing of the image on the recording paper

involves a separate image transfer to the recording paper, it is noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue that “[I]n Koguchi, the colorant sheet bonds to an underlying image transfer sheet by a level of adhesive property” and that “[B]y contrast, the contact of color in Taka[n]ashi is provided under tension as the colorant is applied from a continuous roll form”, and that “in Takanashi, the thermal head 1 is abutted against a base layer 7a or a toner sheet to thermally transfer the layer 7b to an image receiving layer” and that “therefore, the toner sheet in Takanashi must be in rolled toner sheet form”, the examiner respectfully notes that Koguchi discloses in Fig. 4, a configuration for the printing machine where the contact of color is provided under tension as the colorant is applied from a continuous roll form similar to the teaching of Takanashi, and that Koguchi further teaches in Fig. 2 another configuration where the image receiving sheet and the toner sheet are provided in cut sheet forms. Therefore, the modification from one configuration to the other configuration is possible.

In contrast to Applicants’ arguments that there is no disclosure of a recording drum of vacuum type in Koguchi, Applicants are urged to refer to Koguchi, col. 23, lines 1-20, where Koguchi teaches the recording drum (34) being provided with a mechanical mount/dismount (36), a suction means (along with piercing holes provided in the outer circumference of the drum), or a combination of both such that the image-receiving

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material and the colorant sheets are securely wound and aligned in a superimposed manner.

Therefore, for the at least above reasons, claims 1, 12/1, 19-22 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Takanashi et al. in view of Koguchi et al.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

December 22, 2003